

Durethan® DP 2131/20 H3.0 000000

Polyamide 6

LANXESS GmbH

Message:

PA 6, 20 % glass fibers, injection molding, heat-aging stabilized, weather stabilized, improved surface finish

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 20% filler by weight		
Additive		heat stabilizer		
Features		Good heat aging resistance		
		Good weather resistance		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.28	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	ISO 60
Molding Shrinkage				ISO 294-4
Vertical flow direction: 280°C, 2.00mm ¹	0.70	--	%	ISO 294-4
Vertical flow direction: 120°C, 2 hours, 2.00mm ²	0.20	--	%	ISO 294-4
Flow direction: 280°C, 2.00mm ³	0.30	--	%	ISO 294-4
Flow direction: 120°C, 2 hours, 2.00mm ⁴	0.10	--	%	ISO 294-4
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7600	4700	MPa	ISO 527-2/1
Tensile Stress (Break, 23°C)	150	100	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	3.0	7.0	%	ISO 527-2/5
Flexural Modulus ⁵ (23°C)	6400	4100	MPa	ISO 178/A
Flexural Stress ⁶				
3.5% strain	195	110	MPa	ISO 178/A
23°C	210	130	MPa	ISO 178
Flexural Strain at Flexural Strength ⁷ (23°C)	4.0	6.5	%	
ISO Shortname	PA 6, GHR, 14-080, GF20	--		ISO 1874
Residual Moisture Content	0.030 - 0.12		%	Karl Fisher
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	< 10	< 10	kJ/m ²	ISO 179/1eA
23°C	< 10	< 10	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	40	40	kJ/m ²	ISO 179/1eU
23°C	45	60	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	< 10	< 10	kJ/m ²	ISO 180/1A
23°C	< 10	< 10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength				ISO 180/1U
-30°C	30	30	kJ/m ²	ISO 180/1U
23°C	30	45	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	195	--	°C	ISO 75-2/A
Melting Temperature ⁸	222	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C	2.0E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C	9.0E-5	--	cm/cm/°C	ISO 11359-2
Injection	Dry	Unit	Test Method	
Drying Temperature - Dry Air Dryer	80.0		°C	
Drying Time - Dry Air Dryer	2.0 - 6.0		hr	
Processing (Melt) Temp	270 - 290		°C	
Mold Temperature	80.0 - 120		°C	
NOTE				
1.	60x60x2; MT 80°C; 600 Bar			
2.	60x60x2			
3.	60x60x2; MT 80°C; 600 Bar			
4.	60x60x2			
5.	2.0 mm/min			
6.	2.0 mm/min			
7.	Pull Rate: 2 mm/min; 50% RH			
8.	10°C/min			

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